

Claims

1 1. AM receiver comprising at least one IF filter with a fixed IF bandwidth,
characterized by at least one downconversion stage (3, 4, 5) to shift the signal
input thereto into an IF range (IF1) having a variable oscillation frequency
(f_{LO1}) which is adjustable to detune a wanted center frequency (f_C) of a
5 wanted signal part (30) from a center frequency (f_{IF1}) of said at least one IF fil-
ter so that an unwanted signal part (31b) adjacent to said wanted signal part
(30) lies outside said fixed IF bandwidth.

2. AM receiver according to claim 1, **characterized by** a baseband process-
10 ing stage (12) which readjusts the detuned IF signal to a predetermined center
frequency.

3. AM receiver according to claim 2, **characterized in that** said baseband
processing is performed digitally.

4. AM receiver according to claim 1, **characterized in that** a downconver-
15 sion stage which readjusts the detuned IF signal to a predetermined center fre-
quency.

5. AM receiver according to anyone of the preceding claims, **characterized**
20 **in that** it is a digital shortwave receiver, in particular a Digital Radio Mondial
receiver.

6. AM receiver according to anyone of the preceding claims, **characterized**
25 **in that** said at least one IF filter is an analogue filter.

7. AM receiver according to anyone of the preceding claims, **characterized**
in that said fixed IF bandwidth is 20 kHz.

8. AM receiver according to anyone of the preceding claims, **characterized**
30 **in that** said unwanted signal part (31b) is detected by analyzing the power of
FFT carriers outside the wanted signal part (30), BER fine tuning in a digital
baseband processing or during optimization of an Automatic Gain Control volt-
age.

1 9. Method to process a received AM signal wherein the received and
eventually preprocessed AM signal gets shifted at least once into an IF range
(IF1), **characterized by** detuning a wanted center frequency (f_C) of a wanted
signal part (30) from a center frequency (f_{IF1}) used during at least one IF fil-
5 tering with a fixed IF bandwidth so that an unwanted signal part (31b) adja-
cent to said wanted signal part (30) lies outside said fixed IF bandwidth.

10 10. Method according to claim 9, **characterized by** readjusting the detuned
IF signal to a predetermined center frequency after said at least one IF filter-
ing.

15 11. Method according to claim 9 or 10, **characterized in that** it is used for
digital shortwave reception, in particular Digital Radio Mondial reception.

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